LISTING OF THE CLAIMS

1. (Cancelled)

2. (Currently amended) The particle sizing method of claim ~~1~~ 3 wherein said measurement value comprises an analog measurement value.

3. (Currently amended) ~~The~~ A particle sizing method ~~of claim 1 further~~ comprising:
receiving a measurement value from a nephelometer;
comparing said received measurement value against a plurality of reference values, said plurality of reference values each indicating a size of a particle;h
providing a particle size of a particle associated with said received measurement value based at least upon said comparing;
wherein said measurement value is provided by a particle detector of said nephelometer; and
incrementing a count associated with said particle size upon said providing a particle size.

4. (Cancelled)

5. (Previously Presented) A particle sizing apparatus comprising:
a nephelometer;
an input coupled to an output of a nephelometer to receive an indicia of particle size wherein said output of said nephelometer is coupled to particle detector of said nephelometer;
a plurality of discriminators coupled to said input; and
a reference circuit coupled to said plurality of discriminators, said reference circuit to provide particle size reference information.

6. (Original) The particle sizing apparatus of claim 5 wherein said reference circuit comprises a plurality of resisters serially connected between a first reference voltage and a second reference voltage.

7. (Cancelled)

8. (Cancelled)

9. (Original) The particle sizing apparatus of claim 5 further comprising one or more logic devices coupled to said plurality of discriminators, said one or more logic devices to receive data from said plurality of discriminators.

10. (Original) The particle sizing apparatus of claim 9 wherein said one or more logic devices comprises a plurality of counters correspondingly coupled to said plurality of discriminators.

11. (Previously Presented) A particle sizing apparatus comprising:
an input to receive an indicia of particle size;
a plurality of discriminators coupled to said input;
a reference circuit coupled to said plurality of discriminators, said reference circuit to provide particle size reference information;
one or more logic devices coupled to said plurality of discriminators, said one or more logic devices to receive data from said plurality of discriminators:
wherein said one or more logic devices comprises a plurality of counters correspondingly coupled to said plurality of discriminators and said one or more logic devices further comprises a plurality of shift registers correspondingly coupled to said plurality of counters.

12. (Original) The particle sizing apparatus of claim 11 wherein said one or more logic devices further comprises at least one of a microprocessor, a digital signal processor and a microcontroller and wherein said plurality of shift registers are coupled together and wherein said plurality of shift registers are coupled to said at least one of a microprocessor, a digital signal processor and a microcontroller.

13. (Original) The particle sizing apparatus of claim 12 wherein said at least one of a microprocessor, a digital signal processor and a microcontroller to analyze pulse data from said discriminators, said pulse data indicating particle size information.

14. (Previously Presented) A particle sizing apparatus comprising:
an input to receive an indicia of particle size;
a plurality of discriminators coupled to said input;
a reference circuit coupled to said plurality of discriminators, said reference circuit to provide particle size reference information;
one or more logic devices coupled to said plurality of discriminators, said one or more logic devices to receive data from said plurality of discriminators,
wherein said one or more logic devices comprises at least one of a Programmable Logic Device (PLD), an Application Specific Integrated Circuit (ASIC), and an Application Specific Standard Product (ASSP).

15. (Original) The particle sizing apparatus of claim 14 wherein said one or more logic devices further comprises at least one of a microprocessor, a digital signal processor and a microcontroller coupled to said at least one of a Programmable Logic Device (PLD), an Application Specific Integrated Circuit (ASIC), and an Application Specific Standard Product (ASSP), said at least one of a microprocessor, a digital signal processor and a microcontroller to analyze pulse data from said discriminators, said pulse data indicating particle size information.

16. (Previously Presented) A particle sizing apparatus comprising:
an input to receive an indicia of particle size;
a plurality of discriminators coupled to said input;
a reference circuit coupled to said plurality of discriminators, said reference circuit to provide particle size reference information;

one or more logic devices coupled to said plurality of discriminators, said one or more logic devices to receive data from said plurality of discriminators, wherein said one or more logic devices comprises at least one of a microprocessor, a digital signal processor and a microcontroller to analyze pulse data from said discriminators, said pulse data indicating particle size information.

17. (Previously Presented) A particle sizing apparatus comprising:
an input to receive an indicia of particle size;
a plurality of discriminators coupled to said input;
a reference circuit coupled to said plurality of discriminators, said reference circuit to provide particle size reference information;
a plurality of resistors correspondingly coupled to outputs of said plurality of discriminators; and
a plurality of capacitors coupled to said plurality of resisters.

18. (Original) The particle sizing apparatus of claim 17 further comprising one or more scaling amplifiers correspondingly coupled to one or more of said plurality of capacitors.

19. (Original) The particle sizing apparatus of claim 18 wherein outputs from said one or more scaling amplifiers provide a voltage proportional with a mass per volume of air.

20. (Previously Presented) A particle sizing apparatus comprising:
an input to receive an indicia of particle size;
a plurality of discriminators coupled to said input;
a reference circuit coupled to said plurality of discriminators, said reference circuit to provide particle size reference information;
a plurality of resistors coupled to outputs of said plurality of discriminators; and
one or more differential amplifiers coupled to said plurality of resistors.

21. (Original) The particle sizing apparatus of claim 20 wherein outputs of said differential amplifiers provide analog voltage indications of mass per volume of air for a particle size range.

22. (Original) A particle sizing apparatus comprising:
a plurality of low pass filter circuits;
a plurality of discriminators correspondingly coupled to said plurality of low pass filter circuits;
a microprocessor coupled to said plurality of low pass filter circuits, said microprocessor to facilitate provision of reference particle size information to said plurality of discriminators; and
an input coupled to said plurality of discriminators to receive an indicia of particle size.

23. (Original) The particle sizing apparatus of claim 22 wherein said provision of reference particle size information is provided via a pulse width modulated signal.

24. (Previously Presented) A particle sizing apparatus comprising:
an input to receive an indicia of particle size wherein said input receives an analog indicia of particle size;
an analog to digital converter coupled to said input, said analog to digital converter to provide digital particle size data corresponding to said analog indicia of particle size and to provide peak value indications of said analog indicia of particle size; and
at least one of a microprocessor, a digital signal processor and a microcontroller coupled to said analog to digital converter.

25. (Original) The particle sizing apparatus of claim 24 wherein said input to receive an indicia of particle size is coupled to an output of a nephelometer.

26. (Original) The particle sizing apparatus of claim 25 wherein said output of said nephelometer is coupled to particle detector of said nephelometer.

27. (Original) The particle sizing apparatus of claim 24 further comprising a discriminator coupled to said input and said at least one of a microprocessor, a digital signal processor and a microcontroller.

28. (Original) The particle sizing apparatus of claim 27 wherein said at least one of a microprocessor, a digital signal processor and a microcontroller receives a trigger indicia from said discriminator and analyzes pulse data from said analog to digital converter based at least in part upon said received trigger indicia.

29. (Cancelled)

30. (Cancelled)

31. (Cancelled)

32. (Currently amended) ~~The~~ A particle sizing apparatus ~~of claim 29~~comprising:
an input to receive an indicia of particle size wherein said input receives an analog indicia of particle size;
a peak detector coupled to said input;
sample and hold circuitry coupled to said peak detector;
an analog to digital converter coupled to said sample and hold circuitry;
at least one of a microprocessor, a digital signal processor and a microcontroller coupled to said peak detector and said analog to digital converter; and
~~wherein~~ said at least one of a microprocessor, a digital signal processor and a microcontroller receives a trigger indicia from said peak detector and analyzes pulse data from said analog to digital converter based at least in part upon said received trigger indicia.

33. (Currently amended) ~~The~~ A particle sizing apparatus ~~of claim 29 further~~ comprising:

an input to receive an indicia of particle size wherein said input receives an analog indicia of particle size;

a peak detector coupled to said input;

sample and hold circuitry coupled to said peak detector;

an analog to digital converter coupled to said sample and hold circuitry; and

at least one of a microprocessor, a digital signal processor and a microcontroller coupled to said peak detector and said analog to digital converter; and

a discriminator coupled to said input and said at least one of a microprocessor, a digital signal processor and a microcontroller.

34. (Original) The particle sizing apparatus of claim 33 said at least one of a microprocessor, a digital signal processor and a microcontroller receives a trigger indicia from at least one of said discriminator and said peak detector and wherein said at least one of a microprocessor, a digital signal processor and a microcontroller analyzes pulse data from said analog to digital converter based at least in part upon said received trigger indicia.

35. (Previously Presented) An apparatus comprising:

particle detector to detect particle related information;

first output circuitry coupled to said particle detector to provide a first output of detected particle related information;

integration circuitry coupled to said particle detector to integrate said particle related information over a period; and

second output circuitry coupled to said integration circuitry to provide an average DC analog output related to integrated particle related information.

36. (Original) The apparatus of claim 35 wherein said first output is an analog output.

37. (Original) The apparatus of claim 35 wherein said particle related information comprises particle size information.